

CLAIMS

1. *(ORIGINAL)* A method for generating a reference transmission signal for use in testing a communications system, comprising:
 - capturing a data packet transmission signal containing a plurality of reference data;
 - digitizing said data packet transmission signal;
 - retrieving at least a selected portion of said plurality of reference data from said digitized data packet transmission signal to produce a plurality of retrieved data;
 - modulating a carrier signal with said plurality of retrieved data to produce a digital transmission signal; and
 - storing said digital transmission signal.
2. *(ORIGINAL)* The method of claim 1, wherein said capturing a data packet transmission signal containing a plurality of reference data comprises receiving said data packet transmission signal as an analog signal.
3. *(ORIGINAL)* The method of claim 1, wherein said capturing a data packet transmission signal containing a plurality of reference data comprises receiving said data packet transmission signal as a wireless signal.
4. *(ORIGINAL)* The method of claim 1, wherein said capturing a data packet transmission signal containing a plurality of reference data comprises receiving said data packet transmission signal as a wired signal.
5. *(ORIGINAL)* The method of claim 1, wherein said retrieving at least a selected portion of said plurality of reference data from said digitized data

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packet transmission signal to produce a plurality of retrieved data comprises demodulating at least a selected portion of said digitized data packet transmission signal to produce a plurality of demodulated data.

6. *(ORIGINAL)* The method of claim 1, wherein said retrieving at least a selected portion of said plurality of reference data from said digitized data packet transmission signal to produce a plurality of retrieved data comprises decoding at least a selected portion of said digitized data packet transmission signal to produce a plurality of decoded data.

7. *(ORIGINAL)* The method of claim 1, wherein said modulating a carrier signal with said plurality of retrieved data to produce a digital transmission signal comprises encoding said carrier signal with said plurality of retrieved data.

8. *(ORIGINAL)* The method of claim 1, wherein said storing said digital transmission signal comprises storing said digital transmission signal in memory.

9. *(ORIGINAL)* The method of claim 1, further comprising modifying one or more selected bits of said plurality of retrieved data prior to said modulating a carrier signal with said plurality of retrieved data to produce a digital transmission signal.

10. *(ORIGINAL)* The method of claim 1, further comprising:
retrieving said stored digital transmission signal; and
frequency up-converting said retrieved digital transmission signal to produce said reference transmission signal.

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11. *(ORIGINAL)* The method of claim 10, further comprising modifying one or more selected bits of said plurality of retrieved data prior to said modulating a carrier signal with said plurality of retrieved data to produce a digital transmission signal.

12. *(ORIGINAL)* An apparatus including circuitry for generating a reference transmission signal for use in testing a communications system, comprising:

signal capture means for capturing a data packet transmission signal containing a plurality of reference data;

digitizer means for digitizing said data packet transmission signal;

first data retrieval means for retrieving at least a selected portion of said plurality of reference data from said digitized data packet transmission signal to produce a plurality of retrieved data;

signal modulator means for modulating a carrier signal with said plurality of retrieved data to produce a digital transmission signal; and

storage means for storing said digital transmission signal.

13. *(ORIGINAL)* The apparatus of claim 12, further comprising data modifier means for modifying one or more selected bits of said plurality of retrieved data prior to said modulation of a carrier signal with said plurality of retrieved data to produce a digital transmission signal.

14. *(ORIGINAL)* The apparatus of claim 12, further comprising:
second data retrieval means for retrieving said stored digital transmission signal; and

frequency conversion means for frequency up-converting said retrieved digital transmission signal to produce said reference transmission signal.

15. *(ORIGINAL)* The apparatus of claim 14, further comprising data modifier means for modifying one or more selected bits of said plurality of retrieved data prior to said modulation of a carrier signal with said plurality of retrieved data to produce a digital transmission signal.